

Abhishek Rajora

<https://github.com/brillard1/>

<https://brillard.netlify.app/>

Education

Rajasthan, India

IIT Jodhpur

July 2020 - July 2024

- **Major:** Computer Science and Engineering, B.Tech
- **Programming Coursework:** Introduction to Computer Science, Data Structures and Algorithms, Pattern Recognition and Machine Learning, Software Engineering, Mathematics for Computing
- **Engineering Coursework:** Calculus I & II, Probability, Statistics and Stochastic Processes, Digital Design, Foundations of Quantum Information, Signals and Systems

Experience

Design Credit, IIT Jodhpur

Ubiquitous Sensor Data Analysis

Jan - July 2022

Undergraduate Student Researcher

Dr. Dip Sankar Banerjee

[Github](#)

- Discovered a novel clustering technique for BA which can find hidden routines and capture patterns in ubiquitous data.
- Utilized topic modeling on text data for mining inherent topics and to extract the dynamics of the sensed data.
- Increased silhouette score by utilizing three different techniques used for evaluation, named LDA, NMF and PLSA.
- Leveraged Knowledge: Behavior Analysis, Python, Scikit-learn, Clustering based on cosine similarity, LDA, NMF, PLSA, Topic modeling for generalized properties, IoT data analytics

PRML, IIT Jodhpur

SER: Speech Emotion Recognition

Jan - May 2022

[Github](#), [Report](#), <https://emotion-detection-dep.herokuapp.com/>

Dr. Richa Singh

- Developed and evaluated various ML models to classify emotions based on voice features including chroma vectors, mel coefficients and MFCC.
- Utilized librosa library to extract time series vectors from audio data and performed fourier analysis on it to obtain MFCCs.
- Increased the performance accuracy of the applied models by utilizing techniques named time rolling, time stretching and pitch variation which established uniformity in data.
- Leveraged Knowledge: Librosa library for extracting the dynamics of audio data, Scikit-learn library, Shallow MLP, 1-D CNN, KNN, LSTM, Boosting Techniques, Flask, HTML, CSS, JavaScript, GIT

Projects

Personal Website: <https://brillard.netlify.app/> (for additional information and projects)

Personality Detection

[Github](#), [Report](#)

- Developed a personality detection model which processes text data and classifies people on the basis of posts and comments they put on social media.
- Incorporated regex module and nltk library to extract and convert the dynamic text data into relevant information.
- Transformed the text data into lemmatized vectors using Tfidf Vectorizer which transfigures the textual information into feature vectors.
- Utilized: MBTI Dataset, Tfidf Vectorizer, Natural Language Processing, Scikit-learn library, nltk, regex, Boosting Techniques, Google Bert Tokenizer, Data Analytic

SummarYT: Youtube Transcript Summarizer

[Github](#), <https://summaryt.herokuapp.com/>

- Implemented and embedded summarizer API into the website to summarize YouTube video transcripts which are automatically extracted by utilizing YouTubeTranscriptAPI.
- Integrated nlp tokenizer, stemmer and eliminated the stop words to dilate the relevance of the summarized text.
- Utilized: Python, Procfile, Flask, HTML/CSS, Javascript, sumy-nlp-tokenizer, YouTubeTranscriptAPI, LsaSummarizer

babble: A Chat Webapp

[Github](#)

- Developed and Designed a full stack web application using React Js and Firebase which allows users to interact using text messaging.
- Revitalized the application server by establishing a google authenticator and utilizing firebase function to filter curse words and ban the associated users on their continuous repetition.
- Utilized: React Js, Firebase for its functions, Firestore, Cloud Computing, HTML/CSS, Javascript, GIT

blogtek: Technical Blogging Website

[Github](#)

- Created a web application utilizing Django framework that allows users to write and navigate through blogs containing technical tweaks.
- Integrated Pillow library allowing users to rectify and manipulate their profile avatar.
- Utilized: Server side programming, Django, Python, Pillow library for image manipulation, HTML/CSS, GIT

Skills

Software: C++, Python, HTML/CSS, Javascript, Django, ReactJs, Node Js, Flutter **Others:** Blockchain, Pentesting, MongoDB, Firebase, SQL, Cloud Computing

Programming: [Active]: Codeforces([Brillard](#)), CodeChef([Brillard](#)), AtCoder([brillard](#)) [familiar]: Leetcode, SPOJ, hackerearth

POR and Achievements

- **Student Guide:** Counseling Service, IITJ.
- **2020** Qualified in top 2% of JEE-20, among 1.3 million students.
- **2020** Won Gold Medal in International Mathematics Olympiad conducted by SOF.